Amendments to the Abstract:

Please substitute the following version of the Abstract, with changes shown by strikethrough (for deletions) or underlining (for added matter).

ABSTRACT OF THE DISCLOSURE

A gas permeable probe for use in an optical analyzer for an exhaust gas stream flowing through a duct or chimney emprises has:

- an elongate hollow structure having first and second ends and a side wall, with an optical cavity defined between said the first and second ends within said the side wall,
- a filter forming part of said the elongate hollow structure,
- a mounting structure at said the first end and adapted for mounting said the elongate hollow structure within said the duct or chimney,
- an optical window at said the first end permitting a light beam originating from an optical analyzer to enter into said the optical cavity to travel from said the first end to said the second end,
- a retroreflector provided at said the second end for returning said the light beam to said the first end of said the hollow structure, and
- a tube disposed within said the mounting structure and having first and second opposite ends, said the first opposite end being located remote from said the first end of said the elongate hollow structure and being closed by a first window adapted to transmit said the light beam from an optical analyzer into the tube and said the second end of said the tube being closed by a second window adapted to transmit said the beam of light from said the tube into said the optical cavity and said the returned light beam from said the optical cavity into said the tube, said the tube thereby defining a closed cavity, said the closed cavity being one of an evacuated cavity and a cavity containing a neutral gas.